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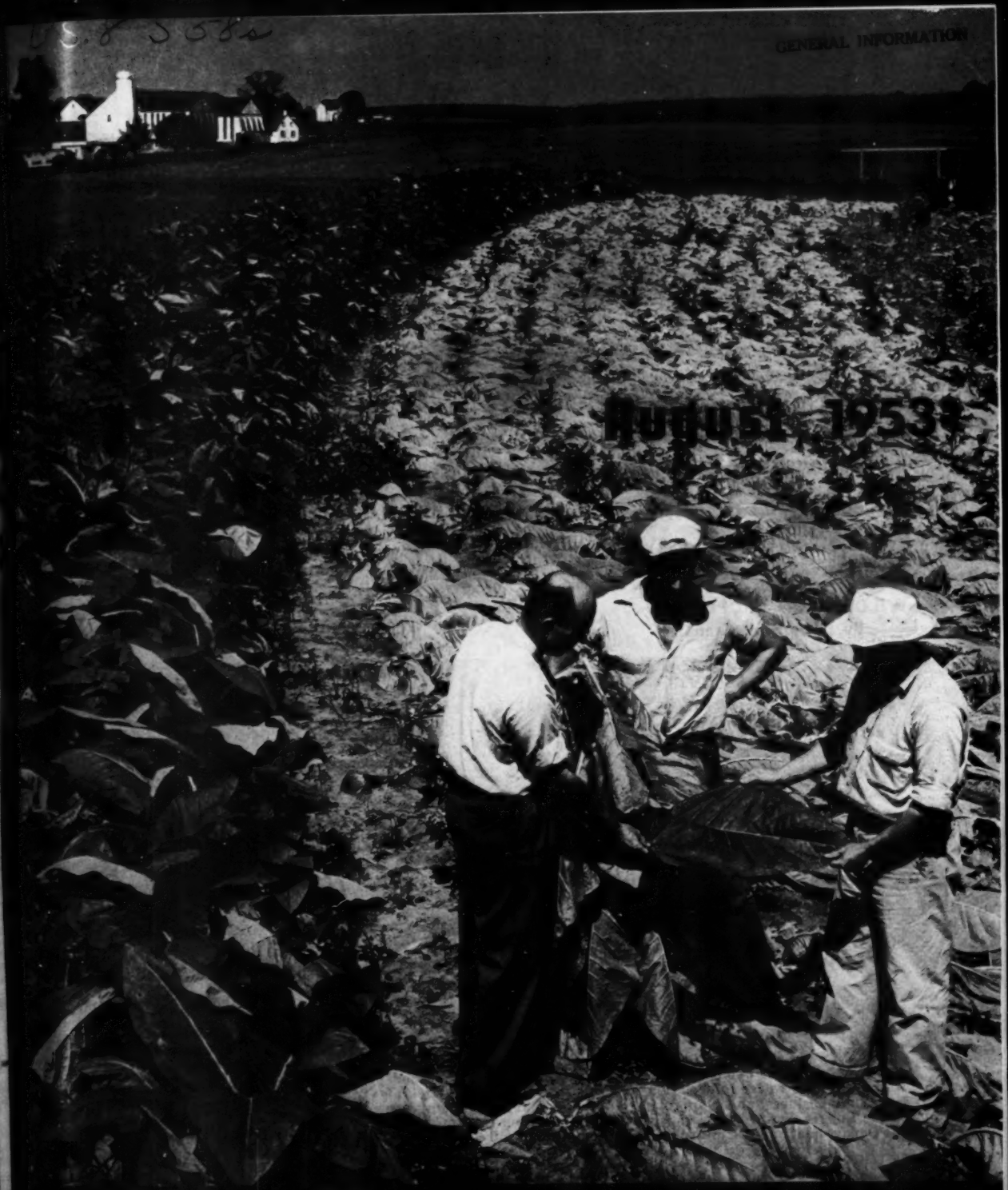

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★ THIS MONTH ★

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WELLINGTON BRINK
Editor

SOIL CONSERVATION is published by direction of the Secretary of Agriculture as administrative information required for proper transaction of the public business, under approval (August 6, 1951) of the Director of the Budget. SOIL CONSERVATION supplies information for workers of the Department of Agriculture and others engaged in soil conservation.

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HOW TO PLAN AIR TOURS.—A new booklet, "Planning Soil Conservation Air Tours," has been issued by the State Soil Conservation Committee of Michigan, East Lansing. Beautifully printed and organized, it gives exactly the concise information needed by soil conservation districts which are contemplating a soil conservation air tour as an educational method to acquaint people with land use problems and practices. It shows how to proceed with arrangements for plane inspections, makes suggestions as to preparations on the ground, offers a model committee setup, and so on. The booklet is illustrated by half-tones, and includes a sample air tour map for passengers.

Air tours are getting to be an old story in Michigan, where they have been popular and useful in explaining soil and water conservation practices. Groups that have worked together on such tours include the Michigan Department of Aeronautics, Civil Aeronautics Administration, Michigan Department of Conservation, Michigan Association of Soil Conservation Districts, Michigan Department of Agriculture, Michigan Flying Farmers, Michigan State College Cooperative Extension Service, State Soil Conservation Committee, and the Soil Conservation Service.

FRONT COVER.—This photograph by Gordon S. Smith was made on the Christ Neff farm in famed Lancaster County, Pa. It was taken one year ago at the time tobacco was being harvested, the crop being on the contour, of course. Left to right: W. Martin Muth, work unit conservationist; Richard Neff, son of owner; and Howard Siglin, vocational teacher. The leaf was of very high quality.

All orders go to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Water Storage Was Good Business

A single dam, constructed as a part of a conservation plan, brings remarkable results to California farm.

By HERB BODDY

IT USED to be that Porter T. Peabody would get a scant ton of cereal hay per acre from one 15-acre dry land field. Now, however, with water from his new dam, he's getting five times as much good forage from the same acreage.

Peabody's farm is near Gilroy, in the Loma Prieta (Calif.) Soil Conservation District. His neighbors know him as a dollar-wise chap, who is not addicted to fads.

Note.—The author is in the current information division, Soil Conservation Service, Portland, Oreg.

Born and raised on the home ranch, Peabody knows the ups and downs of farming through crop years good and bad. He early learned to have faith in the wisdom of good land use. But he also learned that conservation farming requires hard work, year after year.

He says he couldn't get along without the 81 acre-foot water-storage dam he built in the canyon above his ranch house. But for a quarter century or more it was only a dream.

The new dam is why his new pasture is doing so well.

This pond has turned dry lands into good producers of forage.

Peabody's new pasture land never produced so much good feed as this year.

Part of Peabody's new pasture with sprinklers on. Technician Gene Thomas and Peabody like its looks.

For years Peabody raised fruits, nuts, and livestock with little more than seasonal rains. Cereal grain planting never produced much hay and grazing.

Peabody's search for more feed for his beef cattle and sheep led in 1950 to his sitting down with technician Gene Thomas to talk about dams. They selected a canyon site which was a natural drainage for runoff from the surrounding 460-acre watershed.

By mid-summer—less than a month after work on the fill started—the dam was ready. It measured 60 feet high and 240 feet across at the crest. The average depth of the pond was 36 feet. Today this pond irrigates some 15 acres of pasture, with about 30 acre-feet of water carry-over in dry years.

During the springs of '51 and '52, Peabody seeded 15 acres to the following permanent pasture mixture: perennial ryegrass, 3 pounds; tall fescue, 4 pounds; Ladino clover, 3 pounds; birdsfoot trefoil, 2 pounds, and orchardgrass, 1 pound. To get a good seedbed, he plowed, disced and used a roller-type seeder. He started sprinkler-irrigating with dam water early in May 1951. The new seeding was irrigated 20 times up to mid-October. Last year he cut the frequency of waterings in half.

Peabody didn't apply any commercial fertilizer until last fall when he put on 300 pounds of 16-20-0 per acre. Sheep grazed the lush, one-year-old pasture stand with relish.

The pond has many uses. It not only irrigates a pasture carrying 100 breeding ewes, but also furnishes good sports fishing for Peabody and his friends.

Gene Thomas discusses a conservation point with Mr. and Mrs. Peabody.

GRASS CONTEST.—Farmers from 48 counties in Wisconsin are entered in the fourth state-wide grassland farming contest this summer, according to Vic Burcalow, University of Wisconsin agronomist and general chairman for the contest.

The contest is aimed at increasing interest in grassland farming, and its goal is to encourage more production of abundant pasture, forage and feed for livestock without wasting soil.

DISTRICT PROFILE

HARRY SWENSON of WASHINGTON

THE soil conservation district movement has one of its warmest boosters in Harry Swenson, dairyman of Grays Harbor County, Wash. In his community of Elma he is known as a good neighbor, a friendly counselor, and a man who fairly lives and breathes soil and water conservation. It's good when your own people look on you that way!

Harry Swenson wears his mantle well.

Swenson has been crusading for the district movement since early '40. He is Washington's senior district supervisor.

During his 12 years on the board of the Grays Harbor Soil Conservation District, Swenson has played a big part in setting up the much admired county-wide flood control program. As chairman of his district board for 7 years, secretary-treasurer and vice-president of the state district association, he has helped shape the course of the district movement in the Evergreen State.

Swenson grew up on a dairy farm in Tillamook County on the Oregon Coast, and moved to Grays Harbor County in western Washington at the start of World War I.

Of his early farming experience in the Wynooche Valley, he says, "I was a good man in those days if I do say so myself. Two of us used to get up and milk 46 cows by hand, do a whole day's haying, milk the cows again in the evening and then go out and dance until the wee small hours."

Swenson broke away from farming to manage the Grays Harbor Dairyman's Association for several years. It was while serving in this post that he married.

It's no overstatement when Harry calls his wife "A first class cook." Having put my feet under the Swenson table many times, I can vouch for that.

Swenson has a 140-acre bottom land farm on the Chehalis River, turning out hay and pasture for his 40 dairy cows. He's one of the first Grays Harbor County farmers to use sprinkler irrigation and now waters 40 acres that way.

Harry Swenson. (Myers photo, Elma, Wash.)

He also was one of the first farmers in his soil conservation district to seed an improved pasture mixture under the district program of improved methods of soil preparation and seeding. Many of the new, good-looking pastures showing in the county got their start from the seedings Harry made years ago. He hopes to see the time when all Grays Harbor County farmers will have top quality pastures. His help to others is hastening the coming of that day.

Harry and his wife are active members of Sharon Grange and of the Elma Methodist Church, where Mrs. Swenson has been organist for some 21 years. Taking the lead in civic activities has become normal. "I like to be a good neighbor," he says.

Swenson's good nature makes him an ideal leader of group activities. Many times he has been instrumental in ironing out differences and molding harmony. He always sees that everyone has a chance to be heard.

(Continued on page 16)

Even the Bean Can Serve

By IRWIN J. TEN HAKEN

Charles Dodt serving beans at luncheon.
(Photo by courtesy of The Manistee News-Advocate)

BEANS have their place in soil conservation. That is a bold statement, when one recalls how beans have ravished some of our best cropland. But in the small Finnish town of Kaleva, Mich., beans do have a respected role in soil conservation, as evidenced at the annual meeting of the Manistee County Soil Conservation District.

In 1949 Charles and Harry Dodt, elevator and feed store operators, began wondering how they could participate more directly in the soil conservation program of the local district.

Geographically, Kaleva is the most centrally located town in Manistee County, the logical place for farmer-type meetings. It contains several stores, a bank, postoffice, and garages, but not a restaurant. Here's where the Dodts thought they might do their bit. By furnishing a noon lunch to those attending, the Dodts would make it possible for the Manistee Soil Conservation District to have an all-day annual meeting.

The Dodts discovered appetites! About 100 persons attended that first year and the menu included *baked beans*, hot dogs, doughnuts, and coffee furnished free by the Kaleva Produce Company and served by the Ladies Aid of the Finnish Lutheran Church.

At the next annual meeting the piece de resistance again was beans, a major item of business at the elevator. Nearly 150 attended.

Lunch—featuring beans—continued to be a yearly affair, with the seventh annual meeting, this year, the largest to date for the district and one of the largest in the entire state. More than 300 were present.

This year's program included a panel discussion on Christmas tree production, which is important in northern Michigan. It was led by Taisto Kataja, forester for the American Boxboard Company, located in Manistee. Others on the panel were three district cooperators with experience in planting, growing and marketing Christmas trees.

Another panel, dealing with "Soil Conservation and Its Importance in the Community," moderated by W. W. Russell, district conservationist, included a banker, a newspaper publisher, a farm equipment salesman, and a district cooperator.

Dr. Louis Wolfanger, department of land and water conservation, Michigan State College, made an enlightening talk on world soils and how the soils of America compare with those of other nations.

Both county newspapers were represented at the meeting. Also participating were Extension Service, Forest Service, Production and Marketing Administration, vo-ag classes, veterans' instructors, and representatives of the Michigan Employment Security Commission, and the Michigan Soil Conservation Committee.

Ten members of the Manistee Chamber of Commerce donned aprons and helped serve lunch. Most of the local business men took time to join in the lunch and catch some of the conservation spirit of the day.

Yes, beans, once a scourge in Manistee county, are now in some degree atoning for past destruction by aiding in the district's program once a year.

Note.—The author is soil conservationist, Soil Conservation Service, Manistee, Mich.

Wildlife on Croplands

When conservation practices are applied to the land the habitat is improved for birds and animals.

By EDWARD H. GRAHAM

Note.—The author, now assistant chief of the Soil Conservation Service, wrote this article when he was chief of the biology division. It is taken from the Proceedings of the United Nations Scientific Conference on the Conservation and Utilization of Resources, held in 1949 at Lake Success, New York.

SOME wild vertebrate animals are considered harmful, a great many seem to have no economic value, and a number are considered useful because of sport, their fur, or other values. Wildlife also has important aesthetic and ecologic values, but such values in practical agricultural programs are usually given little weight.

Along with cultivated crops, domesticated animals, grass, and trees, wild animals are a basic biological resource. Wildlife cannot rightly be separated from "land resources" as it has been separated in the agenda of this Conference. Wildlife is as much a product of the land as any other living resource.

The management of wildlife is different from that of all other living resources in some fundamental respects. Wildlife in the United States is not owned by the person on whose land it occurs. As an inheritance of English law, American wildlife belongs to the State, not as proprietor but in its sovereign capacity for the benefit of all the people. Therefore, while a man may sell his cultivated crops, domesticated animals, livestock, trees and other land products, he cannot sell the wildlife which his land produces. He can, however, sell hunting privileges to those who have obtained a hunting license from the State. He may also, under State law, sell furs which he obtains from animals he has trapped on his own or other lands.

Wildlife also differs from many other living resources in that, for the most part, it is a by-product of lands which are used primarily for the production of other crops. Although some land in the United States is devoted exclusively to the production of wildlife, such as public refuges and extensive marshes, most wildlife comes from land that is used for cultivated crops, livestock, and wood products.

Because of the nature and ownership status of wildlife, operations on private cropland intended to increase the production of wild animals are most likely to succeed if they have land-use values in addition to their wildlife values. The things that are being done for wildlife benefit on cropland in the United States can be separated into two groups. First are operations on land that has as its chief value the production of wild animals. Secondly, there are land-use operations that produce wildlife on land used also for other purposes.

It has been estimated by the Soil Conservation Service that there are approximately 100 million acres of land in the United States that are not adapted to the production of cultivated crops, livestock or trees, the most suitable use of which is wildlife production. Approximately one-third of this acreage is on farm land. One type of land suited best to wildlife is the marsh which it is not physically desirable or economically feasible to drain. Both coastal salt-water marshes and inland fresh-water marshes have been given special attention for the production of fur-bearers, especially muskrat, and for migratory water-fowl. The specific things done to marshland for such purposes are: fencing, to control cattle grazing; ditching, chiefly to provide wildlife travel lanes; control of water-levels to manipulate vegetation; controlled burning to manage vegetation; and seeding and planting of desired plant species.

Other agricultural lands that can be devoted exclusively to wildlife are odd areas. These are usually small, such as inaccessible corners of cultivated fields, gullies, rough and rocky sites, highly eroded spots. Odd areas are managed for wildlife production by protecting them from fire and grazing. They are frequently planted to trees and shrubs that provide wildlife food and cover. Although individually small, the total acreage of odd

areas is very large—amounting perhaps to something like 10 million acres in the United States.

In addition to the development of lands such as marshes and odd areas that are best used when they are managed exclusively for wildlife, there is a group of practices that produce wildlife as a by-product of cultivated crop production. One such practice is the field border planting. In many regions the margin of a crop field, where it adjoins woodland, produces little or no growth of crop plants and frequently erodes into an unsightly and unproductive area. Because of the shade and root competition of the adjacent trees and the infertile nature of the soil, most plants make poor growth on field margins. After considerable trial the Soil Conservation Service found that two perennial legumes would grow well under such conditions. These two plant species are now used a great deal in revegetating crop field borders. The larger shrubby species, *Lespediza bicolor,* is planted next to the trees in a band 15 or 20 feet wide. Beside the bicolor on the field side of the border the smaller wand-like *Lespedeza sericea* is planted in a band of comparable width. Sericea serves as a turn-row for team and tractor and for wildlife cover. The seed of bicolor provides A-1 bobwhite quail food and the flowers are an important source of nectar for honey-bees. Millions of bicolor plants and thousands of pounds of seed of bicolor and sericea lespedezas are produced for field-border plantings in the United States each year.

The hedge is a land-use practice on cropland that is becoming more and more popular in the eastern United States, and to some extent in the humid West. The plant most used is multiflora rose (*rosa multiflora*), which grows to a height of 8 or 10 feet and a width of 10 or 12 feet. It is not big enough to shade crops or to provide root competition and it does not spread into adjacent land that is in use. Multiflora rose hedges were first used in conservation operations as contour guide lines and as barriers against erosion and swift runoff of water on steep slopes. The stems of the plant are stiff and very thorny, and it is now being used as a living fence because it will turn livestock if plants are set a foot apart in the row. Multiflora rose fences are used to separate crop fields from pasture, and to protect gullies and other odd areas from grazing cattle. The hedges provide excellent wildlife cover and contribute to a permanent land pattern of value to wildlife. The present demand for multiflora rose far exceeds the supply available from both public and private nurseries.

The revegetation of streambanks is receiving increased attention by both soil conservationists and wildlife managers. Stabilization of streambanks not only protects cropland through whch the stream runs, usually very productive bottom land, but it also produces excellent wildlife cover of desirable pattern in terms of strips of vegetation across crop fields. Since the most desirable plant species for streambank stabilization have proven to be shrubs or plants of shrub-like form, their cover value is considerable. Protection or eroding streambanks also improves the stream for fish and other aquatic life by reducing sedimentation. Streambank stabilization, combined with the soil conservation program necessary on the watershed to supplement and make secure the work on the streambank itself, is one of the major contributions to improvement of stream habitat. In the United States such work has proved that it can convert muddy streams to a good condition suitable for trout.

Throughout the central United States windbreak plantings of trees and shrubs have been used a great deal especially to protect farmsteads and crop fields from damaging winds. Considerable attention has been given to the selection of trees and shrubs in windbreaks for their wildlife value, because such woody plantings in otherwise treeless areas can be of great importance to wild creatures. Frequently a row of conifers is included in a windbreak to provide winter shelter for wildlife. The margins of windbreaks are planted to shrubs that produce fruits and seeds that provide food for wild birds and mammals. The establishment of some 7,000 miles of field windbreaks contributes much to the improvement of cropland for wildlife.

A land-use device on cropland of value to both fish and other wildlife is the farm pond. Farmers and ranchers, receiving technical assistance from the Soil Conservation Service alone, during the past 15 years have constructed more than 125,000 ponds. These ponds are built on selected sites with a design that renders them a permanent part of the farm setup. They are frequently used to provide water for livestock, for irrigating small gardens, spraying orchards, or some other agricultural purpose. Nearly half of them, however, have been carefully stocked with the correct number of

large-mouth black bass and bluegill sunfish ("bream") to permit their management as fishponds. Many of these ponds are fertilized with commercial fertilizer and are producing about 200 pounds of palatable fish per surface acre per year. A great many of the ponds that have been constructed are fenced, protecting them from livestock. The area within the fence is often planted to trees and shrubs which help to make the pond and the fenced area around it a particularly valuable small refuge for fur bearers, water-fowl, and game species, as well as fish.

The management of marshes, odd areas, ponds, and streambanks, and the establishment of windbreaks, hedges, and field borders on land used primarily for the production of cultivated crops can make cropland excellent wildlife habitat. Such practices are applied to the land first because they are good for the land itself and therefore of value to those who operate the land. Because of this they are the most permanent and important things that can be done to agricultural land to make it productive of wildlife.

Many other things can be done to improve cropland for wildlife. Unless such measures can be assured a permanent place in the agricultural scheme of things, however, they cannot be depended upon for long to produce the wildlife that agricultural land can make possible. Since more than half of the land acreage of the United States is in farms and ranches and since something like 80 percent of the hunting and much of the fishing is done on agricultural lands, it is evident that in the United States we must depend upon such lands for much of the useful wildlife we are to produce. We believe that the things that have been done through soil and water conservation work in the United States have pointed the way toward the most permanent and productive use of cropland for wildlife. The practices described are being applied. They are producing wildlife in America. As we husband our land more and more carefully in the future wildlife will take an important place along with the other crops that the land produces.

Two Days of Talking Things Over

TWO Federal agencies charged with primary responsibility for developing soil and water research, and for taking the results of such research to American farms, joined in a conference at the Plant Industry Station in Beltsville, Maryland, May 14 and 15. The meeting signalized a recently inaugurated program of closer liaison between the Soil Conservation Service and the Bureau of Plant Industry, Soils, and Agricultural Engineering. The purpose of tighter teamwork is to assure an early recognition of problems on which scientific investigations are needed, and to speed new information, as it is acquired, out to the farms and ranches. A two-way flow of communication is being set up throughout the country.

The conference was headed by the chiefs of the two bureaus, Dr. Robert M. Salter and Dr. Albert H. Moseman. Supporting them were administrative and technical officers of the Beltsville and Washington staffs, together with a large representation from SCS's Northeastern regional headquarters, which helped in planning the conference.

This meeting was a sort of "trial run," serving as an opportunity for a large part of the new "team" to get acquainted and to talk over mutual problems on program panels in the course of looking over some of the experimental plots on the station farm. Close research liaison, said John Lamb, Jr., talking on how to maintain technical standards in the SCS program, will "help to develop confidence, strength and competence" in doing the job out on the farms.

Moseman and Salter discussed the work of their respective bureaus, with special stress on matters of mutual interest. The conservation of soil was explained by Salter as the prevention of all sorts of soil deterioration, not erosion alone, and as including the building up of soil. And the function of SCS is to make use of all available technology to protect the farmer's resource and to build it up to major production.

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Pest Control

as an example of how community and neighborhood land problems can be tackled successfully when city and country people work together.

By HERB BODDY

This water-laden area is fast being turned into crop and pasture land.

CHANGING a mosquito haven to lush forage and cash cropland, is a pretty big order. That's the story of an old Moro Cajo Slough at the hands of an aroused community.

"Skeeters," hiding out in the big marsh, north of Castroville, Calif., have long preyed on town and country people for miles around. Few, indeed, kept calm when the pesky, buzzing insects were about.

But today the mosquitoes are on their way out. Their ouster from Moro Cajo Slough through draining of their breeding ground affords relief to farmers who share ownership of some 1,200 acres of the marsh. It means that wet land which has bogged down tillage work season after season is now ready for development by conservation farming.

Draining the wet acres was not easy. It took a lot of planning, teamwork and experience. Landowners had to be brought into agreement, the aid of interested groups enlisted, and engineering lined up. Wildlife values had to be considered.

Those who joined in the successful project are being hailed today for a job well done.

Directors of the Elkhorn Soil Conservation District, the coordinators, describe the project

Note.—The author is in the current information division, Soil Conservation Service, Portland, Oregon.

When representatives of agriculture, industry, business and government work side by side on soil and water conservation work as in this instance, we see one of the newer trends that are hastening land improvements the country over.

Six interested groups and ten landowners helped to put over the Moro Cajo job. Participating agencies included the Northern Salinas Valley Mosquito Abatement District, the Elkhorn Soil Conservation District, Monterey County, the State of California, the Kaiser Aluminum Company, and the Soil Conservation Service. Cooperating farmers included the G. W. Lyons estate, B. Lyons, the California Artichoke and Vegetable Growers Association, the California Ranch and Packing Co., J. P. Dolan and Son, V. D. Sella, John Mansera, Rena Whittington, Margaret A. Collins, and J. Sandholdt.

The marshes of Moro Cajo are well known to many Monterey County residents. They're on State Highway No. 1, two miles north of Castroville. As a haven for roving swarms of mosquitoes, the watery bog is made to order. In fact, Howard Greenfield, manager of the Northern Salinas Valley Mosquito Abatement District, had the area tabbed as one of the county's most troublesome breeding spots.

Landowners often wished they could use the slough. A thousand acres or so, tilled and

farmed the conservation way, would produce a lot of good pasture and row crops. But as things were, the land was good for only a little grazing.

It wasn't that the farmers hadn't tried to put their land in shape for peak production. They laid out a lot of ditches over the years. But, lacking a good outlet for waste water, the slough stayed wet.

Late in 1951, farmers asked directors of the Elkhorn district for some help. And the district governing board invoked the assistance of technicians of the Watsonville headquarters of the Soil Conservation Service.

The technicians mapped out a drainage plan which drew support from both farmers and district directors. The plan called for lowering the outlet channel at Moss Landing Harbor, replacement at a lower elevation of tide gates and culverts at the county road, and removal of goosenecks on culverts at State Highway No. 1. In addition, a pattern of "feeder" ditches, connecting up to the main outlet channel, were to be laid out by individual landowners.

Such a plan was needed to stop the inflow of tidal waters at high tide and provide good drainage of flood waters from the lands above tide gates. Temporary flooding of slough lands would occur during periods of heavy winter rains, but adequate drainage through the normal growing season would be assured.

With the technique laid out, directors began contacting interested parties, lining up easements for ditching and operating funds.

The Northern Salinas Valley Mosquito Abatement District voted a sum of $2,500 to cover its

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Studying the Moro Cajo problem: Randy O. Barsotti, G. W. Lyons, Robert Blohm, president of the Elkhorn Soil Conservation District, and Merrill A. Wood, of SCS.

Gullies on the land before planting began.

Eroded land on lower side of transmitter site.

In the Air and on

Here's a radio station that practices th
story that it tells on its daily

By HOWARD W. MEAG

WHAT possible connection could a radio station have with soil conservation?

In the case of WWVA in Wheeling, W. Va., the tieup is a direct one.

Years ago, the Federal Communications Commission, the guiding hand of broadcasting, defined the duty of radio stations as being to serve the "public interest, convenience, or necessity." And WWVA has gone a step further.

Our station went on the air in 1926, a pioneer in the great Ohio Valley. And within a very short time it was serving a large rural audience.

Ten years later, WWVA began to appreciate the full importance of farm broadcasting, and planned a series of programs to carry needed information to the thousands of rural folks in the listening area. This area, even then, was an extensive one, covering a vast portion of Ohio, West Virginia, and Pennsylvania. And so it was that in 1936 an outstanding program of public service was originated—"The Tri-State Farm and Home Hour." This show is still a popular daily feature.

But WWVA wasn't one just to talk about farm problems. It had to do something about them.

When WWVA increased her power to 50,000 watts in the 1940's, and set up her transmitting equipment and towers on a former 163-acre farm near St. Clairsville, Ohio, the land was in very poor condition. The entire area was a sad picture of erosion and waste.

Early in the planting program, the pines looked like this. New growth was watched and measured.

Note.—The author is promotion director, WWVA, Wheeling, W. Va.

d on the Ground

t practices the soil conservation
s on its daily program.

ARD W. MEAGLE

Here are the trees shown at left, in 1953.

First step was to purchase and plant 3,000 red and white pines. A year later, E. V. Jotter, Ohio State Forestry District supervisor at Cambridge, became interested in the possibility of using the land as a demonstration project to show the value of reforestation in controlling erosion and turning waste lands into productive and attractive areas. WWVA wholeheartedly backed the idea. The cooperation of C. W. McKnight, SCS work unit conservationist, and Bob Lang, county agricultural agent, was obtained and an extensive reforestation project was worked out.

Since then, a series of additional plantings has brought the total number of trees on the property to more than 35,000. These trees are in various stages of growth, some now as tall as 15 feet. In addition, contour furrow planting on hillsides has been effectively demonstrated, and highly successful.

In 1949, WWVA reached an agreement with the Ohio state game protection division of the Conservation Department to use this land as a game refuge. Feeding stations were established and

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"Front door" of WWVA's transmitter site. Immediate vicinity has been completely landscaped.

Open field above gullies before planting.

Same field seen immediately above, as it looks today.

Precision Is Their Business

By FRED W. HERBERT

TWENTY miles south of San Francisco the Pacific Ocean coast line forms a beautiful and almost perfect arc. Hence, the picturesque name, "Half Moon Bay," for the town that is situated there. Close to the ocean around Half Moon Bay are areas of deep, fertile soils on valley bottoms and alluvial fans. These soils produce a great variety of irrigated crops, including French artichokes, brussels sprouts, cauliflower, broccoli, kale, parsley, onions, peas, and carrots, as well as nursery stock, flowers and flower seed. A mile or so back from the ocean the lands are sloping and hilly. They have highly erodible soils. If protected, these soils are capable of supporting very profitable dairy and livestock enterprises. The need for protecting them with soil conservation practices was early recognized and the Half Moon Bay area became a part of the first soil conservation district in California—the San Mateo County Soil Conservation District, organized in 1939.

An important practice in the San Mateo County Soil Conservation District is that of pasture irrigation. Exact techniques are required to establish irrigated pastures. This brings our little story up to its "leading man," who is Manuel Sousa. Manuel is an assistant engineer on the staff of the Soil Conservation Service, assisting the San Mateo Soil Conservation District. This story has to do with the way a man's business and his hobby sometimes fit together.

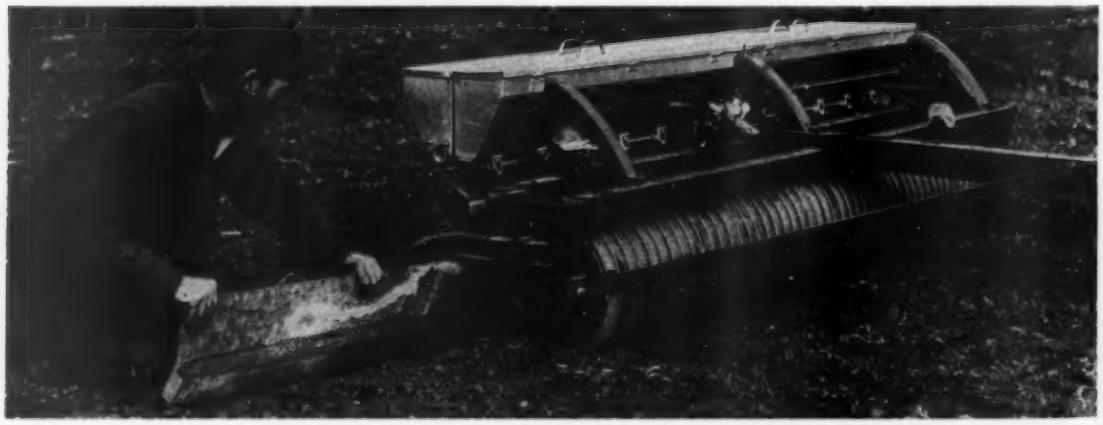
I came to know about Manuel's hobby through his work on seeding technique in establishing pastures. In explaining the technique, he pointed out that he had to figure the amounts of each kind of seed in the mix, the rate of movement of the seeder, and the area to be covered. He designed a pan to catch the seed, and a fractional-acreage meter. By running the seeder one-tenth of an acre, then weighing the seed and determining the proportions of the different kinds, he could calibrate the seeder openings and secure any desired rate of seeding. He perfected the method which resulted in obtaining excellent stands of the pasture plants.

I complimented him on his painstaking exactness.

"Well," he said, "After all, precision is my business."

Then he told me about his hobby and that is the story of the "Half Moon Bay Spanishtown Dons."

Note.—The author is assistant state conservationist, Soil Conservation Service, Oakland, Calif.



Seeder, and the seed pan designed by Manuel Sousa. Its value is told in this article.

Champions all: the Half Moon Bay Spanishtown Dons, famous drill team. They are led by a master of precision who, in his regular job as a soil conservation technician, is equally exact in his measurement and use of a seed mixture.

Manuel founded and organized this drill team in June 1947. The idea was to give young men something worth-while to do in their spare time and also benefit the community. In the gold rush days of California, the town of Half Moon Bay was inhabited by the Spaniards and, by them, given its original name of "Spanishtown." Hence, the name "Spanishtown Dons" was born. A striking Spanish-type uniform in black and gold was designed and has become a unique feature of the organization. The team is composed of 21 men, 4 color bearers, 2 banner bearers, a majorette, and a drill captain.

The Dons have a national record of winning 150 consecutive first place awards. They have never been defeated in field competition. They participated in 405 parades and exhibitions, including numerous television appearances. They have won 202 firsts in 207 parades. In their quest for strenuous competition, the Dons have traveled over 36,000 miles and performed before 13 million people.

The "Dons" was the first civilian drill team to drill at the Capitol Grounds in Washington, D. C., and the first drill team to win the Grand Award at the famed Wisconsin Spectacle of Music at South Milwaukee. They have revolutionized modern drilling by introducing the heavy cadence, slow turn, freeze, and other original maneuvers. The team won the National Championship in 1949, 1950 and 1951. The team has accumulated a collection of 126 trophies.

I had no trouble getting the story of his team from Manuel. He is very enthusiastic about it and gives all the credit to the young men and to his majorette. The majorette is Patsy Speer, winner of the California State Championship for the past 3 years. She has a perfect record of 25 firsts in as many competitions. She specializes in three-baton twirling and has won 33 trophies and 22 medals.

Manuel is proud of his team. About himself he is reticent, but I learned he is the holder of the California State Championship award for "Best Drill Team Captain." His highly entertaining and truly inspiring manner of cadence calling, complete with Spanish commands, has won him 20 medals.

This year, in July, the "Dons" made appearances in Chicago, New York and Washington, D. C. In New York they performed on Ed Sullivan's Toast of the Town television show. In Washington they were at the Plaza, where they were presented by their fellow Californian, Vice President Richard M. Nixon.

Because of the diversity of farming in the San Mateo Soil Conservation District, Manuel's conservation engineering duties require him to wor closely with farmers on a great variety of practices such as irrigation systems, various types of dams, stock water ponds, drainage, terraces, land leveling, and moisture and compaction testing.

I asked Manuel if this work was a training ground for his hobby, or whether it was the other way 'round.

"Well, Fred," he said, "Although it is very strenuous, I get real satisfaction and enjoyment in training these young men and demonstrating the results of that training. That is why I spend much of my spare time and all of my vacations doing it. And it helps my regular soil conservation work, too. Soil conservation engineering and running a drill team really have a lot in common. In both cases you deal with people, you must have patience, and both of them do require precision."

Quite a lot, thought I, remembering his seeding system and having seen his amazing drill team in action. Said a fellow worker, "Manuel, you know, is a perfectionist by nature."

IN AIR AND ON GROUND

(Continued from page 13)

small game was released. The stations are regularly supplied during the winter by the Conservation Department. Today, all types of game, including deer, may be observed taking advantage of the feeding stations and the protective cover.

WWVA is indeed proud of her public service, on the air broadcasting conservation information and also on the land. The WWVA transmitter site and the surrounding 163 beautiful acres are veritably her "pride and joy."

HARRY SWENSON

(Continued from page 5)

Harry's guidance is one of the reasons for the notable success of the Grays Harbor Soil Conservation District. The board's policy of inviting those with grievances to "come and talk things over" has paid off in large measure. It's men like Harry Swenson who are putting the "go" in the good land use movement in our state.

—Earl A. Lewis

TALKING THINGS OVER

(Continued from page 9)

Grasses and mulches in the northeast came in for consideration, as did soil conditioners, pasture establishment, weed control, corn production under irrigation, tillage and fertilizer placement, nutrient-legume-grass relationships, and photoperiodism.

As a result of these 2 days of mingling together in field and forum, it is expected that each agency, and ultimately the farmers and ranchers, will derive good dividends in terms of increased understanding and efficiency.

RESOURCES GROUP.—The new president of Resources for the Future, Inc., is Dr. R. G. Gustavson, chancellor of the University of Nebraska. Horace M. Albright, president of the United States Potash Company, Inc., has been made chairman of the board of directors.

Resources for the Future, Inc., is a nonprofit corporation formed by a committee of citizens who accepted an invitation from the Ford Foundation to serve as an advisory group on resources, and to assist the officers of the Foundation in planning a program and to work in the field of research and education for resources development and conservation. Resources for the Future, Inc., is supporting the Mid-Century Conference on Resources for the Future, to be held in Washington, D. C. in December.

Other members of the board of directors are: Edward J. Condon, vice president of Sears, Roebuck and Co., president of Sears Roebuck Foundation and former president of Friends of the Land; E. B. MacNaughton, formerly president of Reed College and of the First National Bank of Portland, Ore.; Leslie A. Miller, former governor of Wyoming and chairman of the Natural Resources Task Force of the Hoover Commission; Fairfield Osborn, president of the Conservation Foundation; William S. Paley, chairman of the board of the Columbia Broadcasting System; Beardsley Ruml, consultant; and Stanley Ruttenberg, director of education and research, Congress of Industrial Organizations.

A Farmer and His Community

By HUGH F. EAMES

Joe and Esther Sena in a happy mood.

IT was just before Christmas 1946 at Worthington, Mass. Joe and Esther Sena, making their start in farming on their own, had put daughter Sandra to bed and had wrapped the last family presents, when fire struck in the middle of the night.

House, barn, most of the other buildings and equipment, and many first year's crops, including 18,000 bushels of potatoes were destroyed. There was no insurance. All resources, accumulated in 13 years of hard work for other farmers, seemed to have been wiped out.

A few days later, just before Christmas dawned, neighbors came to the wreckage and gave the Senas a neatly hand-lettered message bearing the endorsements of 90 families and individuals. It read:

"We, your friends and neighbors of Worthington, join in sending this token, hoping that it will identify to you the Town's interest and approval of your efforts, and encourage you to continue your development in the face of so disheartening a setback."

With it they left $800 in cash.

This token did all that Worthington folks had hoped. It revived the family's spirits, and gave them a new foundation upon which they since have built solidly. This is reflected in choice of Joe for a 3-year term as selectman and a like term as assessor, in his elections to the PMA committee and as director and treasurer of the Hampshire County Soil Conservation District, in his selection as Parent Teacher's Association Treasurer and Rod and Gun club president, in the choice of Mrs. Sena as a director of the Worthington Health Association, and in their influence and leadership in other town and county activities.

The Senas' 575-acre Hickory Hill Farm has become a model for farmers who seek to make best use of their land and protect future productivity. When you see what the Senas have done, and know the methods of their operations, you understand what they mean when they say that "material things are unimportant in life; it's the neighbors and friends—people who have confidence in you and what you do—that really count."

Joe Sena is principally a potato grower, with side lines in sheep and beef, and a growing desire to raise certified seed potatoes. This is not what his preferences always have been. In grade school days—that's as far as he ever got in formal education—Joe's interests, developed under 4-H guidance of County Agent Harold Eastman, were in poultry, dairying, potatoes, and other vegetables. All of these, except potatoes, have been dropped.

Joe is one of the six sons of Andrew Sena, a former miner who farmed a small acreage. All the sons are farmers, and a daughter is a farmer's wife. Joe got his start in agriculture at Stafford Springs, Conn., when he was chosen to represent his country school in a speaking contest at graduation exercises. He won a $5 gold piece and used it to buy chicks. When the family moved to Easthampton, Mass., he joined 4-H and other poultry clubs and pyramided his flock to 1,300 birds. In

Note.—The author is head of the current information division, Upper Darby, Pa.

4 years he won 32 ribbons and 4 medals in county fair and other competitions.

Meanwhile, on developing an interest in dairying, he sold some of his chickens and bought a $175 purebred Holstein cow, due to freshen in a week, to start his herd. He got her cheap because she milked only at three quarters and had a record of producing only bull calves. She confounded the experts by dropping a heifer calf that Joe named Josie. He showed her at the Eastern States Exposition that year, and was disappointed when she placed tenth among 21 entries. So, he spent another $100 and bought Fancy, a better type, 3-month-old calf. Next year, again at Eastern States, Fancy placed second as a calf and Josie won first place as a junior yearling. From then on in 4-H years, he completed 23 projects and won 950 ribbons in 97 poultry, dairy, and vegetable competitions. In one season's tour over the Vermont-Massachusetts fair circuit his dairy cattle won $600 in cash prizes.

In pyramiding his successes he won the Hampshire County championships in dairy and poultry, and became the first Hampshire County farm boy to win the State silver trophy for accomplishments in 4-H work. A factor in this was his $2,850 dairy herd. He twice captured individual sweepstakes at the Boston Poultry Show, and won the Eastern States dairy championship when one of his cows, a 6-year-old, produced 12,790 pounds of milk and 467.2 pounds of butterfat, at 4-percent test, in 1 year. He and his sister Helen won the State championship as a 4-H dairy demonstration team and a trip to the National Dairy Show at St. Louis. For 2 years he was State champion 4-H boy in Massachusetts.

He became president and held numerous other offices in local, county, and State 4-H dairy clubs, and was secretary-treasurer of the Easthampton Farmers Club, an organization of farmers and businessmen.

But, more important, his achievements influenced his dad to replace a herd of 14 grade and scrub cows with 34 purebred Holsteins, 12 of which Joe owned. After the herd had been increased to 100 like animals, Joe sold his cows to his brothers and bought and developed a pasteurizing and distributing milk business in which he handled 1,000 quarts daily until 1942. Then he and Mrs. Sena, city-born daughter of the Clark family, sold their business and went to Hanover, Va., where Joe became manager-operator of a 2,600-acre farm owned by a group chiefly interested in tobacco.

It was a wheat-corn-oats enterprise, with beef cattle and hogs. In 3 years Joe handled 200 head of Angus and 800 hogs, turned run-down land into lush pastures, rebuilt worn-out soil and used as much as 280 tons of lime in one season. When he substituted barley for corn and began to install conservation practices, to which he had been introduced by the county agricultural agent, nearby farmers caustically commented about his "inexperience" and could not understand why he didn't continue to follow their old established methods. But Joe's methods paid off handsomely and enabled the Senas to enlarge the nest egg which they used when they returned north in 1945 and bought the Worthington farm.

In operations here, and on 40 to 50 rented acres, Joe put half his cropland into grass and half into potatoes. He planted potatoes up and down the slopes the first year, and had much difficulty in cultivating and harvesting. He then turned to the new Hampshire County Soil Conservation District, became one of its earliest cooperators, and obtained help of SCS technicians in establishing conservation practices. The pay-off is found in his 1952 potato crop. It averages 600 bushels (240 is the national average) per acre, as compared to the 300 bushels that he harvested in 1946.

Contour strips and diversions have been his principal means of controlling soil erosion and runoff surface waters. He plowed his first terrace, then hired a bulldozer operator to build others, until 40 acres were thus treated. Building with a bulldozer, rather than a plow, is quicker and more economical, Joe says, unless a farmer has a lot of time and can stretch out the job.

Joe uses fertilizer and lime only as yearly soil tests reveal the need. Lime is never applied until pH is 5.5 or less. Use of fertilizer runs to 2,400 pounds per acre.

He did a good turn for all other taxpayers in the town when he interested officials in building an extra diversion terrace that would end the piling-up of gravel and silt on a highway. Re-

moval of this debris had cost taxpayers $300 to $500 annually. Now there is none to shovel and truck away. Likewise, he interested the town in replacing a 4-inch culvert with one measuring 18 inches. Now, however, with the strips, diversions, and other practices on Joe's farm, the original 4-inch pipe would be too large.

The personal work that Joe Sena has done with them, and what they have seen happening in production on his farm, have been highly important in convincing many farmers that Joe is on the right track. From a handful of farmers that belonged to the Hampshire Soil Conservation District in 1947, membership has grown to 600 farmers representing 55,000 acres. When you ask Joe about this district progress he modestly says, "A lot of farmers have seen the light; some hard-shells, who could see only harm coming out of it, have softened up." And, he notes that farmers who swung to solid grassland are now reestablishing it in contour strips.

Joe needs a good farm pond for fire protection and for spraying his potatoes. He tried to obtain one, on his own, by selecting a site and hiring a bulldozer operator to build it. Along came a hard storm and out went the dike. "Shucks," says Joe, "it cost me $210—money foolishly spent. I'll try again soon, but this time the SCS technicians will select the site, plan the pond, and supervise its construction, and I'm sure I'll get a sound job."

Because he believes his potatoes are equal to any that come out of Maine, or "Little Maines," Joe is anxious to become a producer of certified seed potatoes. Since there is no State regulation, he intends to stimulate the establishment of standards. With good seed and good land fresh out of sod after 2 years of rest, he believes he can meet any requirement.

Joe and Esther Sena have two daughters, Sandra 11, and Cynthia 3, and one son, Tim, who is 1 year old. Sandra already is following in her dad's 4-H steps. She recently won a silver trophy at the Cummington Fair with three pure-bred Shropshires that she developed in 4-H Club work. "Best in the show," the judges said. "Joe was as happy as Sandra, when the results were announced," Mrs. Sena observed. "Glad we are back in the farm show business," Joe exclaims.

In the cozy farm home, which, like the barn and other buildings was built from lumber cut from the farm woods, you'll find a bit of canvas, maybe a landscaping or still life, in oils, hanging against the knotty-pine paneling. Joe says, "I couldn't draw a nail. Esther did it and I think it's a swell job. If it were not for her, I wouldn't be as far along as I am now."

Occasionally Joe goes out and does auctioneering, or custom work for other farmers. But he is most interested in doing the best possible job on the home acres. He practices what he preaches. He won the State conservation award for Hampshire County in 1951. The Senas' big idea is summed up by Esther when she says: "It's our way of life; not just something we do. All our aims, ambitions, plans, and living fit into it. It keeps us helpful and happy."

PEST CONTROL

(Continued from page 11)

share of drainage work and the Kaiser Aluminum Co. underwrote its share of channel improvement. Cost of culvert work was borne by county and state highway departments. Farmers agreed to pay for lateral ditches.

The task of scientifically mopping up the spongy old bog was accomplished early this year without fanfare. Farmers and interested groups liked what they saw. Slough water flowed steadily into Monterey Bay. Ponds began drying and waterlogged acres became tillable for the first time.

Moro Cajo Slough is still a bit wet in places, and you'll need hip boots to cross some of the swales. But the day isn't far off when farmers figure they can say goodbye to their wet lands.

This fall, farmers plan to have some 200 acres of the slough seeded to selected grasses and legumes like birdsfoot trefoil and alta fescue. More new seedlings are on the way. After a spell in pasture, fields will go into artichokes, then back to hay and forage again in line with the best principles of complete soil conservation planning.

With a good share of its mosquito population rubbed out and a big piece of new farmland added to its agriculture, Monterey County is proud of the headway its farmer-conservationists are making under the good land use banner.

It's Old Stuff in the Old World

Where Soils Are Sacred, Conservation Is An Accepted Obligation.

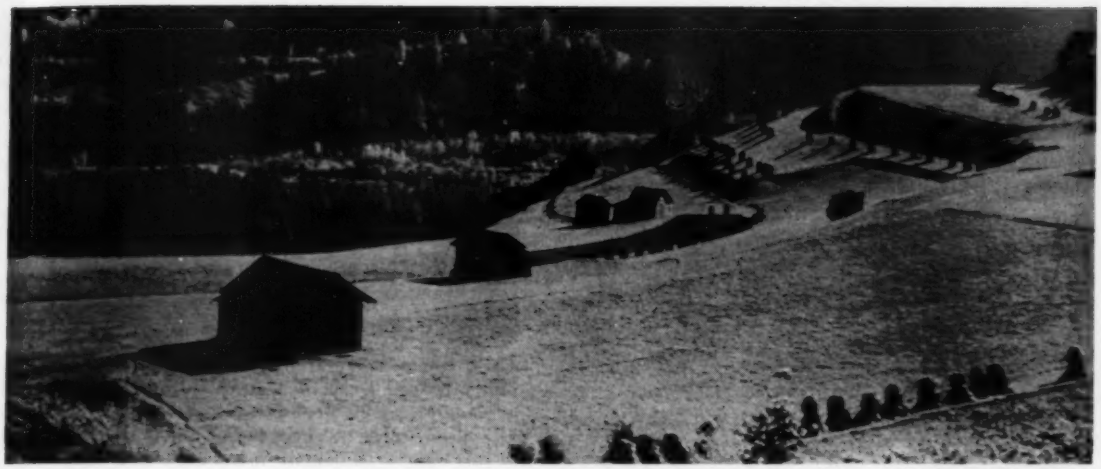
By HENRY C. LINT

THAT we are on the right track is essentially the lesson one can learn from seeing conservation practices in Europe. Farming has been going on in parts of Austria, Italy and Yugoslavia for several thousand years. There are many places where erosion has taken its toll and formerly good lands are probably useless for all time to come. But the important thing, and the thing that helps accent the conservation movement in the United States, is the multitude of places where the very practices being advocated have been working, not just within our generation, but for hundreds and perhaps thousands of years.

European agriculture is still on a manure-economy basis, with livestock as motive power and the resultant high percentage of the land in pasture and rotational hay. That's of course favorable to conservation. Fortunately, the rainfall generally isn't of the gully washer type. There is a great deal of non-contour farming but in general the steeper the slope, the more nearly the cultivation approaches the perfect contour. Wherever there has been deviation from this principle, or neglect

Note.—The author writing as agricultural attache at Vienna, Austria, was formerly district conservationist, Soil Conservation Service, Hackensack, N. J.

This stream with rock-faced slopes now entirely covered with sod has taken care of spring runoff from Austrian mountains for many, many years.



Years of contour cultivation have produced bench terraces kept permanently in sod in the high Alps.

of maintenance on critical slopes, out has gone the soil. The demonstrated lesson therefore is that contouring is effective and is, indeed, the only sound basis for thousand-year agriculture.

Another lesson to be taken from the book of European experience is that of permanence in construction. In June 1951 I delivered one of the American 4-H farm youth exchangees to a beautiful frame home in Austria. The walls were solid stone and 2 feet thick. There wasn't a crack in the stucco outside or the plaster inside. The doors were over 2 inches thick, they didn't sag or creak and they still fitted as doors should. This house was built in 1596. Right across the road was said to be the oldest church in Austria, built in the eighth century. In other words, when Europeans build, they expect things to last hundreds of years. That same expectancy extends to their conservation structures.

There are miles of main drainage ditches with the bank slopes paved with cut stones 12 inches thick. Some are moss covered with age. We don't have any nicer work where a brook passes through the city park at home. The Austrian thinking regarding the cost of such installations is that if one amortizes over eternity, the per annum cost is nil, on the same reasoning that when any number is divided by infinity the answer is zero.

Our primary goal is permanent agriculture, but we could learn something from the Europeans about permanent construction. There is a certain degree of pride in a well-built structure, and if it has cost considerable time and money it is likely to be taken care of.

One of the most revealing illustrations of the European attitude was handed me by a very good friend who emigrated to the United States from Denmark. It's a toss-up whether Denmark, Switzerland or Holland rates first for being painfully clean and orderly. As a boy, my friend had to sweep the street of the village in front of his house every Saturday morning. One time, boylike, he was hurrying through the job so he could join the others playing ball. Perhaps he was doing substandard work and his father gave him a bit of advice: "When you have finished with your work everybody can see how good the job is—but no one can tell how long it took you to do it." I often think of that as I look at some of the well-constructed stone dams and stone-faced streambanks carrying the runoff water from the mountains.

The farmer in the high Tyrolean Alps who dug out the little pockmark depressions in his pasture terraces by hand probably never heard of a basin lister, and if he had one he couldn't use it on the 40 percent slope. But he knows the necessity for saving every drop of moisture just as well as the farmer in Western Kansas.

I'm sure that the grower just outside of Zagreb in Yugoslavia couldn't call up a district supervisor and request a technician to lay out lines for his contour peach orchard. But the orchard's there,

and on the contour, just as nice as anything Bryon Roberts has in New Jersey.

We've used bedding in New Jersey as a simple treatment for improving water-logged pastures, but one has to see the thousands of acres of poorly drained land in Croatia laid out in perfect contour beds and growing excellent wheat crops to realize the practice has such potentialities.

Stone bench terraces are everywhere to be found in Europe, particularly in the vineyard sections. Many of the slopes are over 45 percent and certainly without such terracing the hill and mountain sides would today be of use only for forests. One has to see the hundreds of miles in the east coast of the Adriatic south of Rijecka fully to appreciate the value of such practices. It is said that in times past this area was well covered with trees

These stones, some larger than a man, washed into a pear orchard. Orchardists head up trees very high, and in some places the deposit was 4 feet deep. There was nice clean valley soil here before the outwash from the mountain inundated it.

Small terraces thrown up on the contour hold all the Serbian rainfall. These may be for rice cultivation.

which were cut down by the Venetians to build ships. There was no reforestation and most of the area is barren rock and worthless for all time to come. In striking contrast, there are some areas where bench terraces have been built and many olive groves with trees 12 inches in diameter are to be seen. One has to eat a few of the Dalmatian cherries from the market booths in Split to appreciate what bench terracing can bring forth from what otherwise would be barren land. In the Yugoslav installations, instead of the flat land sloping gently toward the stone wall down the slope, it slopes toward the wall above, and in several places I saw half-eliptical concrete waterways at the base of the stone wall to take care of runoff. Of course, the main watercourse was stone.

One can't take time to check the past history of everything interesting. One example of strip

Dam in gully running parallel to road in Austria. Small tile through dam drain out water held back, while wier notch takes care of freshets.

Wheat growing on perfect contour beds in Croatia, March 1951.

cropping must have been a quarter of a mile in from the road. As far as I could see, one had exactly the same slope on either side of a lane going up the possibly 20 percent grade. On the right, the slope was in contour strips with not a sign of erosion. The area on the left hand side of the lane was gullied and practically worthless even for goat pasture. If there are still in the United States any skeptics about the efficacy of strip cropping send them to Macedonia, and if they can find this same place all their doubts will be dispelled.

The old adage concerning "nothing new under the sun" has a fuller meaning when one remembers all the arguments that raged in the late thirties about the value of contour strip cropping, and then, some 15 years later comes across a farmer in "benighted" Macedonia plowing perfect contour strips with an ox and a wooden plow. One wonders which really is the older, strip plowing or ox plowing.

While there are examples galore of the failure of recognized conservation practices through lack of maintenance, there are possibly many more where there has been adequate maintenance, and where the land is still producing after a thousand years of cultivation. It is from these successes that we can obtain reasurrance of the soundness of our own conservation program.

There is a farmer near Kobarid who was born and has lived in the same house all his life. When he was born the land was part of Austria. From 1918 until 1945 it was Italian. Now it belongs to Yugoslavia.

The land has been part of three different nations within the last 35 years, and since the time of Caesar it has changed hands perhaps, 50 times. But from a conservation standpoint, sovereignty has always remained with the Lord.

Oxen plowing perfect contour strip for potatoes, in Macedonia, January 1951.

GRATEFUL FRIENDS.—Others will find value in this publication, too. Do a good turn by subscribing in their behalf.

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CONSERVATION IN AFRICA.—Time spent by Allen T. Knight, of Canada, studying soil conservation in the Southeastern region in 1945, before he went to Angola, Portuguese West Africa, for the United Church of Canada, is paying big dividends in his mission field.

Knight, a trained agricultural chemist, returned to Spartanburg, S. C., for a two-weeks' "refresher course" in February 1952, while on sabbatical leave. He discussed his work and showed colored slides before a meeting of employees of the Soil Conservation Service.

In a recent letter Knight wrote:

"I suppose it was the village trip of last weekend with Dr. Sid Gilchrist (medical missionary) that brings to mind friends of the Southern States. It was quite an historical village trip. It marked the first time that a village has sent someone to us to ask help in their problem of saving the soil. All previous visits to villages have been made with somewhat the idea of getting the people concerned about soil conservation—this, however, was an actual invitation.

"Deacon Jacinto arrived out in our beautifully terraced fields one Monday morning—fields which he knew better than I—fields which were so poor in 1946 that we could produce nothing better than 40-inch corn plants—a yield of perhaps ¼-ton of corn to the acre. The same field will produce 5 times that yield this year and a crop of velvet beans as well. Would we go out to their village, about 30 miles away, and show them how to save their village?

"Sid loaded up the two-wheel trailer with dispensary, laboratory, examining table, etc. I loaded up the covered wagon with mouldboard plough, disc plough, levels, velvet bean seed, soya bean seed, and two of my African teachers who are also practical farmers.

"Friday night we put on a show using our new projection equipment—public health films and nutrition, agriculture. They sat for 3 hours and even at the end of it, little lads of 10 were wide awake and begged to see some more pictures or even the same ones over again. I don't know how much they got, but even if they picked up 10 percent, it was worth while.

"Of course, there was the temptation to take along the new diesel tractor and our new disc tiller furnished to us by a group of farmers of Alberta. But someone had told me in 1945 that it is good policy to help people to help themselves. To attempt to do everything for people just doesn't work. There were 16 oxen promised for the Saturday—they began to appear at 9 a.m. and since most of them had never worked together, it took time to get the chains strengthened—one new ox insisted on running away just as the yoke was about to be fastened. How many times have I had to remind myself that this is Africa and consequently be patient. About every 100 feet, one or more of the oxen decided to get tangled up in the chains, each stop necessitating at least 5 minutes. We succeeded in finishing off two terraces, marked out another four with instructions as to how they were to be made, did the first work in building three ditches to take the flood water away from the village.

"This village was established in 1930. In 22 years, many of the fields have been denuded of the entire layer of topsoil. Already there is a considerable migration away from the area because of land hunger. The local nurse is saving most of the children, which means that there are more mouths to be fed.

"I laid down the law to them on Sunday morning in church—perhaps it would be more appropriate to say that I warned them. I know a similar area where in 1920 there were 100 houses in a village—now there are 8; and the reason—soil erosion and a one-crop corn economy.

"This year there is hope of our producing at least enough soya beans for the sick people at the hospital and for one meal a day for our students. The explanation—the arrival of the "Big Red Ox," our diesel tractor. Now, everyone wants to learn to drive the tractor. The second class of students specializing in shopwork goes out next week—one of them stays with us to take over tractor maintenance and driving."

MEETING PLACES SHIFT.—Supervisors of the Riley County, Kans., Soil Conservation District hold their monthly meetings in various country schools and invite the people to come.

The program is kept informal. After the regular business session, one of the supervisors talks about some phase of the soil conservation district, and the work unit conservationist discusses some of the community's conservation problems. Usually, colored slides are shown. Both men and women are encouraged to ask questions. Women are among the best conservationists.

Arrangements are made by cooperators. Usually the cooperator publicizes the meeting through the local PTA. Attendance has been good. Somebody always shows up with a coffee pot and cake or cookies.

The result has been better understanding by the people of soil conservation districts, better conservation farmers, and the satisfaction the supervisors get from giving better service to communities.

—B. K. Geraghsy.

FRIENDLY POND.—When Roland Avery, of the Middlesex County (Mass.) Soil Conservation District got tired of lugging water from his household supply to his dozen head of thirsty beef cattle, SCS technician Carol O. Clark told him that the best site for a stock water pond would be astride the line between his farm and that of his neighbor, Arthur Fitz.

Fitz didn't have livestock, but he wanted to keep up to 20 beef animals or about 100 sheep, and also have a recreation spot. So the two friends got together and shared the cost of building the pond across their dividing line. It has a one-fourth acre surface and the water usually is 8 feet deep.

Since then, Fitz has built another pond, with an average water depth of only 2 feet, so that children can have a safe place to skate.

A contractor built both ponds for less than $500.

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